

REMARKS

The Office Action mailed on August 08, 2007 has been received and reviewed. Claims 1-30 remain in the case. Claims 11-13, 16-18, and 24 were rejected under 35 U.S.C. 102(e) as being anticipated by Midgley et al. (6,732,267). Claims 1 and 7-10 were rejected as being unpatentable over Wolff (US 6886035 B2) in view of Flanagan et al (US 6243737 B1). Additionally, claims 14 and 19 were rejected under 35 USC 103(a) as being unpatentable over Midgley et al (6,732,267) in view of Zhang et al (US 20050120353 A1). Claims 15 and 20 were rejected under 35 USC 103(a) as being unpatentable over Midgley et al. (US 20030074378 A1) in view of Flanagan et al. (US 6243737 B1) Claims 21-23 were rejected under 35 USC 103(a) as being unpatentable over Midgley et al. (US 20030074378 A1) in view of Wolf (US 6886035 B2), while claims 25-27 were rejected under 35 USC 103(a) in view of James (US 6910038 B1). Finally, claim 28 was rejected under 35 USC 103(a) as being unpatentable over Midgley et al.

The present invention enables a user to access and duplicate data in a grid computing environment from a remote computing device. In one embodiment, remote access is accomplished through a web-based interface. By moving grid logic to a web server, the present invention enables distributed duplication and modification of data. Additionally, a web server monitors all modifications to the grid, and can dynamically change browser content. Providing a regularly updated interface to users provides a significant advantage over prior art, especially in situations where the grid is regularly updated.

Applicants have elected to incorporate additional limitations into various independent claims to clarify the novel aspects of the invention. Claim 11 has been amended to read “providing a dynamic web-based graphical user interface.” To further clarify the invention and expedite allowance, dependent claims 20 and 7 have been incorporated into claims 16 and 1 respectively.

Claim 11 was rejected based on a statement from Midgley et al, “The database can include pointers to the location of the different versions of the target files on the tape, thereby providing more rapid access...” Applicants note that while pointer duplication is anticipated by the prior art, the replication location service of the present invention

includes additional functionality. A clarification of the replication location services will illuminate the novelty of the present invention.

The replication location service in the present invention maps logical file names to physical filenames and aggregates information relating to local replica catalogs. This functionality is depicted in Figure 2. There is no indication that Midgley uses or aggregates replica catalogs. The prior art is meant to provide backups and point in time restoration, while the present invention is configured to reduce latency and improve data locality by duplicating throughout an internetwork. As such, the present invention maintains the same information in multiple locations and maintains replica catalogs.

Claims 11 and 16 have been modified to include this functional distinction over the prior art. Specifically, claims 11 and 16 now include “invoking a replica location service ~~associated with a grid;~~ configured to aggregate information about local replica catalogs and map logical file names to physical file names;” In light of the amendments to claim 16, rejections relating to claims 12, 13, 17 and 18 are overcome.

Additionally, the Examiner stated that “data replication operations in response to selections on the graphical user interface” as cited in claim 11 is anticipated by Midgley, “This system can provide a user interface that will allow the user to select a network consumption limit that is representative of the users selected limit for the amount of network bandwidth to be allocated to the backup replication process...” Applicants assert that the interface of Midgley performs a different task. Specifically, the interface presented by Midgley regulates bandwidth and space allocations for backup procedures. There is no indication that Midgley enables users to specify duplicate locations, create read-only copies, generate local copies, or generate mapping files.

Claim 11 has therefore been amended to delineate that the user interface enables duplication throughout the network topology, by including “conducting remote or local data replication and mapping operations in response to selections on the graphical user interface by the user.” Applicants assert that claim 24 should also be allowed based on similar reasoning.

Claims 1 and 7-10 were rejected under 35 USC 103(a) as being unpatentable over Wolff in view of Flanagan et al. The examiner cited Wolff et al. as grounds for rejection for the graphical user interface introduced in claim 1. Wolff includes a “SCREEN

DRIVER 170: This module is responsible for presenting a GUI of the OS and any application executing on the node that typically require human consumption of the visual information.” The GUI disclosed by Wolff is specific to that computing device, apparent by the reference to “the OS.” Furthermore, the GUI mentioned does not disclose a GUI that references other computing devices, mapping libraries, or network resources. The purpose of the GUI in the present invention is to modify or delete existing mappings and data replications across multiple computing devices and operating systems. Additionally, multiple copies are published simultaneously through the interface, providing additional distinction over the prior art. The phrase “to view data replications on multiple network nodes” has been appended to Claim 1 to reflect the scope of the GUI in the present invention.

The use of GUI generation in response to a function was rejected by the examiner as being anticipated by Flanagan. Flanagan does disclose generation of a user interface in response to a function, but the present invention generates a GUI based on specific actions, such as successful user authentication. Claim 1 has been amended to clarify that the GUI may be generated by a specific action in lieu of a generic function. Since the present invention may inspect user credentials before generating an appropriate interface, claim 1 has been modified to read “a GUI generation module configured to examine user credentials and generate...”

Claim 7 was rejected by the examiner based on Flanagan’s discussion of a potential web interface. However, as mentioned by the examiner, “Wolff fails to disclose a system comprising a graphical user interface.” The display components discussed in Wolff are configured to display information relevant only to the OS and associated applications limited to a local unit. There is no suggestion to extend Wolff to incorporate web based elements capable of viewing replicated data or network nodes. As explained *In re Mills*, the mere fact that references can be combined does not render the resultant combination unless the prior art also suggests the desirability of the combination. Based on the limited scope of user interfaces in Wolff, the combination was not anticipated or suggested.

Nevertheless, to clarify the functionality of the interface, the limitations of claim 7 have been included in claim 1 to clarify that the web based graphical user interface is

capable of displaying replicate data information. Applicants additionally assert that dependent claims 8-10 should be allowed based on the modifications made to claim 1.

CONCLUSION

Applicants assert that Midgely, Wolff, James, Flanagan, and Zhang do not disclose all of the limitations included in the presented claims. Applicants therefore assert that each of the independent claims is in condition for allowance and respectfully request prompt allowance of the pending claims. In the event that the Examiner finds any remaining impediments to the prompt allowance of any of these claims which could be clarified in a telephone conference, the Examiner is respectfully urged to initiate the same with the undersigned.

Respectfully submitted,

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